

# Research

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## The Microfluidics Systems Biology lab

The Microfluidics Systems Biology lab was established to address challenging questions related to cancer and developmental biology, infectious disease, and other areas of cell and molecular biology using cutting-edge microfluidic devices and novel applications of high-throughput DNA sequencing. The lab is focused on several project areas, which include:

- 1) genotyping single cells isolated from genetically heterogeneous populations such as tumors and microbial consortia
- 2) characterizing transcriptional and epigenetic regulation of gene expression by automated chromatin immunoprecipitation
- 3) mapping regulatory networks and macromolecular assemblies using high-throughput measurements of protein-protein and protein-DNA binding affinities

Our lab collaborates closely with investigators from other A\*STAR research institutes, universities, and industry.

Research in the MSB lab is directed by **Prof. Stephen Quake** under an A\*STAR Visting Investigatorship Programme grant, and by the lab's co-principal investigators, **Dr. William F. Burkholder** (IMCB) and **Prof. Yin Thai Chan** (IMRE and NUS).

All enquiries may be directed to [Dr. William Burkholder](#) and [Dr. Yin Thai Chan](#).

